APPENDIX L PROJECT CONSTRUCTION COSTS WORKSHEETS

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Traditional) November 21, 1995

ADOTFTSB.xls Greiner, Inc / DKC

BURN AREA \$184.000 \$318.4906 RION (HDPE Liner) \$21,422 \$f\$ \$1.80 \$338,553 \$Curbs (Refractry Concrete) 471 \$f\$ \$16.00 \$7,540 Interior Crushed Stone [9"] \$2,380 \$y\$ \$37,70 \$318,327 Berm 524 \$y\$ \$11.00 \$7,7330 \$7,7330 \$20 \$f\$ \$1.80 \$7,7330 \$7,7300 \$7,7330 \$7,7300 \$	November 21, 1995	TRADITIONAL FOSSIL FUEL SYSTEM				
Floor (HDPE Liner)	DESCRIPTION					
Floor (HDPE Liner)	BURN AREA				\$164,906	
Curbs (Refractry Concrete)	•	21.422	sf	\$1.80		
Interior Crushed Stone (9")						
Berr	•					
Zonal FuelWater Delivery Network Piping (2" CS, Welded, w/ Fittings) 300 ff \$15.00 \$4,500 \$3,400 Nozzles 30 ea \$850.00 \$1,500 Drainage System						
Piping (2° CS, Welded, W/ Fittings) 300 if \$15.00 \$4,500 Valves (Motor Operated w/ Box) 30 ea \$850.00 \$3,400 Nozziles 30 ea \$1,700.00 \$5,100 Manholes 3 ea \$1,700.00 \$4,650 Piping (12" DIP) 800 if \$35.00 \$28,000 Kniffe Gate Valves (12") 4 ea \$4,000.00 \$16,000 Meir / Control Structure 1 ea \$5,000.00 \$5,000 Ignition/Flame Generation System 1 ls \$25,000.00 \$5,000 S5,000 Ignition/Flame Generation System 10,905 sy \$11.00 \$119,95			-,	, , , , , ,	,	
Valves (Motor Operated w/ Box) 4 ea \$850.00 \$3,400 Nozzles 30 ea \$50.00 \$1,500 Drainage System	·	300	lf	\$15.00	\$4.500	
Nozzles 30 ea \$50.00 \$1,500						
Drainage System Inlets 3 ea \$1,700.00 \$5,100 Manholes 3 ea \$1,550.00 \$4,650 Piping (12" DIP) 800 lf \$35.00 \$28,000 Knife Gate Valves (12") 4 ea \$4,000.00 \$16,000 Weir / Control Structure 1 ea \$5,000.00 \$5,000 Ignition/Flame Generation System 1 ls \$25,000.00 \$5,000 Ignition/Flame Generation System 1 le \$25,000.00 \$5,000 Ignition/Flame Generation System 1 le \$25,000.00 \$110,000 S110,000 S110,000 S110,000 Confined Entry Fire Trainer 1 ea \$100,000.00 \$100,000 Confined Entry Fire Trainer 1 ea \$100,000.00 \$200,000 Confined Entry Fire Trainer 1 ea \$200,000.00 \$200,000 Control Center 1 ls \$28,000.00 \$200,000 Control Center 1 ls \$28,000.00 \$200,000 Control Center 2 ls \$28,000.00 \$28,000 Control Center 2 ls \$20,000 \$20,000	•					
Inlets					,	
Manholes		3	ea	\$1,700.00	\$5.100	
Piping (12" DIP)						
Knife Gate Valves (12")						
Weir / Control Structure						
Ignition/Flame Generation System						
Apron (Crushed Stone) 10,905 sy \$11.00 \$119,950						
Apron (Crushed Stone) 10,905 sy \$11.00 \$119,950	VELICI E MANEIN/EDING ADEA				\$110 QEA	
Fuselage / Pool Fire Trainer		10,905	sy	\$11.00		
Fuselage / Pool Fire Trainer	MOCKUPS				\$300,000	
Confined Entry Fire Trainer	Fuselage / Pool Fire Trainer	1	ea	\$100,000.00		
Office/Control/Training/ARFF Vehicle Building Control Center 2,000 sf \$100.00 \$200,000 FUEL / WATER STORAGE SYSTEM \$222.061 FUEL / WATER STORAGE SYSTEM \$297 cy \$350.00 \$103,911 Fuel Storage Facility Concrete Dike 297 cy \$350.00 \$103,911 Fuel Storage Tank (10,000G w/ Found.) 1 ea \$14,000.00 \$14,000 Pumps 1 ea \$16,000.00 \$16,000 Piping (4" CS, Welded, Coated) 20 lf \$30.00 \$6,000 Valves 2 ea \$1,200.00 \$2,400 Distribution Piping Piping (2" CS, Welded, Coated, Buried) 800 lf \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank)	_	1	ea			
Office/Control/Training/ARFF Vehicle Building Control Center 2,000 sf \$100.00 \$200,000 FUEL / WATER STORAGE SYSTEM \$222.061 FUEL / WATER STORAGE SYSTEM \$297 cy \$350.00 \$103,911 Fuel Storage Facility Concrete Dike 297 cy \$350.00 \$103,911 Fuel Storage Tank (10,000G w/ Found.) 1 ea \$14,000.00 \$14,000 Pumps 1 ea \$16,000.00 \$16,000 Piping (4" CS, Welded, Coated) 20 lf \$30.00 \$6,000 Valves 2 ea \$1,200.00 \$2,400 Distribution Piping 800 lf \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$2,400 Equipment </td <td>OPERATIONS BUILDING</td> <td></td> <td></td> <td></td> <td>\$228,000</td>	OPERATIONS BUILDING				\$228,000	
Control Center		2,000	sf	\$100.00		
Fuel Storage Facility Concrete Dike		•		\$28,000.00		
Concrete Dike 297 cy \$350.00 \$103,911	FUEL / WATER STORAGE SYSTEM				<u>\$222.061</u>	
Fuel Storage Tank (10,000G w/ Found.) 1 ea \$14,000.00 \$14,000 Pumps 1 ea \$16,000.00 \$16,000 Piping (4" CS, Welded, Coated) 200 lf \$30.00 \$6,000 Valves 2 ea \$1,200.00 \$2,400 Distribution Piping Piping (2" CS, Welded, Coated, Buried) 800 lf \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Fuel Storage Facility					
Pumps 1 ea \$16,000.00 \$16,000 Piping (4" CS, Welded, Coated) 200 lf \$30.00 \$6,000 Valves 2 ea \$1,200.00 \$2,400 Distribution Piping Piping (2" CS, Welded, Coated, Buried) 800 lf \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Concrete Dike	297	су	\$350.00	\$103,911	
Piping (4" CS, Welded, Coated) 200 lf \$30.00 \$6,000 Valves 2 ea \$1,200.00 \$2,400 Distribution Piping Piping (2" CS, Welded, Coated, Buried) 800 lf \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Fuel Storage Tank (10,000G w/ Found.)	1	ea	\$14,000.00	\$14,000	
Valves 2 ea \$1,200.00 \$2,400 Distribution Piping Piping (2" CS, Welded, Coated, Buried) 800 lf \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Pumps	1	ea	\$16,000.00	\$16,000	
Distribution Piping Piping (2" CS, Welded, Coated, Buried) 800 lf \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Piping (4" CS, Welded, Coated)	200	If	\$30.00	\$6,000	
Piping (2" CS, Welded, Coated, Buried) 800 If \$18.00 \$14,400 Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Valves	2	ea	\$1,200.00	\$2,400	
Valves (Motor Operated w/ Box) 6 ea \$850.00 \$5,100 Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Distribution Piping	•				
Tanker Truck Offloading Rack Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water 3 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Piping (2" CS, Welded, Coated, Buried)	800	lf	\$18.00	\$14,400	
Concrete Truck Pad 200 sy \$25.00 \$5,000 Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Valves (Motor Operated w/ Box)	6	ea	\$850.00	\$5,100	
Equipment Pads 20 cy \$400.00 \$8,000 Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Tanker Truck Offloading Rack					
Misc. Steel 500 lbs \$1.10 \$550 Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Concrete Truck Pad	200	sy	\$25.00	\$5,000	
Piping (4" to tank) 150 lf \$30.00 \$4,500 Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Equipment Pads	20	су	\$400.00	\$8,000	
Valves 2 ea \$1,200.00 \$2,400 Equipment 1 ls \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Misc. Steel	500	lbs	\$1.10	\$550	
Equipment 1 Is \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 If \$30.00 \$4,500	Piping (4" to tank)	150	lf	\$30.00	\$4,500	
Equipment 1 Is \$20,000.00 \$20,000 Water Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 If \$30.00 \$4,500						
Water 1 ea \$10,000.00 \$10,000 Storage Tank 1 ea \$10,000.00 \$10,000 Piping (4") 150 lf \$30.00 \$4,500	Equipment	1	ls	\$20,000.00	\$20,000	
Piping (4") 150 If \$30.00 \$4,500						
Piping (4") 150 If \$30.00 \$4,500	Storage Tank	1	ea	\$10,000.00	\$10,000	
, •						
Valves 4 ea \$900.00 \$3,600						
Pumps 1 ea \$1,700.00 \$1,700						

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Traditional) November 21, 1995

ADOTFTSB.xls Greiner, Inc / DKC

•	I	TRADITIONAL FOSSIL FUEL SYSTEM				
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST		
WASTEWATER TREATMENT SYSTEM				\$41,022		
Retention /Evaporation Pond	2,756	су	\$4.00	\$11,022		
Oil / Water Seperator	1	ea	\$20,000.00	\$20,000		
Catch Basin	1	ea	\$10,000.00	\$10,000		
OTHER COMPONENTS				<u>\$534.458</u>		
Sitework						
Clear & Grub	16	ac	\$1,500.00	\$24,000		
Demolition	1	allow	\$5,000.00	\$5,000		
Excavation	25,168	су	\$2.85	\$71,729		
Landscaping	1	allow	\$10,000.00	\$10,000		
Access Road						
Paving	3,333	sv	\$16.00	\$53,333		
Parking Lot	•	• •		,		
Curb	150	If	\$6.50	\$975		
Paving	234	• •	\$9.00	\$2,106		
Security Fence		٠,	40.00	42,100		
6' Chain link w/ 3 str. barbed wire	3,563	If	\$12.00	\$42,750		
Motorized Vehicle gates	3	ea	\$2,500.00	\$7,500		
Water Well	·	Ça	42,300.00	¥7,500		
Well	1	ea	\$10,000.00	\$10,000		
Piping (4")	775		\$30.00	\$23,250		
Valves & Valve Boxes		ea	\$1,400.00	\$2,800		
Environmental Monitoring	2	ca	\$1,400.00	\$2,600		
Fuel System Leak Detection	1	is	\$7,500.00	\$7,500		
Monitoing Wells	8	ea	\$1,000.00	\$8,000		
Water Supply	0	ca	\$1,000.00	\$6,000		
Water Supply Wet Tap	1	ea	\$2,000.00	\$2,000		
Piping w Trenching & Backfill	1,300		\$2,000.00	\$39,000		
Testing & Chlorination	1,300		\$500.00 \$500.00	\$500		
Gate Valves w/ Valve Box	4	ea	\$1,400.00	\$5,600		
Backflow Preventor	1					
		ea	\$9,000.00	\$9,000		
Sanitary Sewer 6" Gravity Piping	50	i.e	\$20.00	\$1,000		
· • =				• •		
4" Force Main Piping	1,300		\$24.00	\$31,200		
Lift Station	1	ea	\$25,000.00	\$25,000		
Electrical Service	1 200	1£	42.00	A2 000		
Primary Distribution	1,300	IT	\$3.00	\$3,900		
Secondary Distribution Distribution/Power to Tank Farm & Offloadin	ee0	1£	607.00	617 EEO		
	650		\$27.00	\$17,550		
Distribution/Power to Fire Trainer Areas	1,200		\$27.00	\$32,400		
Distribution to Waste Water Treatment	230		\$27.00	\$6,210		
System Controls	1 200		\$50,000.00	\$50,000		
Telephone Service	1,300		\$20.00	\$26,000		
Parking Lot Lighting - 25' Alum. Pole	3	ea	\$2,500.00	\$7,500		
Appurtenances						
Pavement Markings	4 400	t.c	40.00	1000		
4" Striping	1,466		\$0.20	\$293		
18" Stop Bar	130	IT	\$1.55	\$202		

Page : 3 of 3

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Traditional) November 21, 1995 ADOTFTSB.xls Greiner, Inc / DKC

325,000

\$2,615,000

		Grenner, inc / DRC					
·		TRADITIONAL FOSSIL FUEL SY					
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE		COST		
Directional Arrows	8	ea	\$55.00		\$440		
•	· ·				\$800		
•					\$370		
	2	Ca	\$105.00		4370		
	2		÷100.00		\$300		
•	_						
and the second s	•				\$5,000		
wisc. / warning	. 25	ea	\$50.00		\$1,250		
			SUBTOTAL		\$1,610,397		
			002/01/12		* 175.0700		
	Permitting	@	1.0%	\$	16,104		
	Impact Fees	. @	allowance	\$	75,000		
	Design Fees	. @	8.0%	\$	128,832		
	CE & I Fees	. @	10.0%	\$	161,040		
			SUBTOTAL		\$1,991,373		
	Contingency	,	15.0%		\$298,706		
		CONS	TRUCTION TOTAL		\$2,290,000		
	DESCRIPTION Directional Arrows Pavement Messages HC Symbols Signs Stop Entry Misc. / Warning	DESCRIPTION Directional Arrows Pavement Messages HC Symbols Signs Stop Stop 3 Entry 1 Misc. / Warning Permitting Impact Fees Design Fees CE & I Fees	DESCRIPTION Directional Arrows Pavement Messages HC Symbols Signs Stop Stop Entry 1 ea Misc. / Warning Permitting @ Impact Fees @ Design Fees @ CE & I Fees @ Contingency	DESCRIPTION QUANTITY UNIT UNIT PRICE	DESCRIPTION QUANTITY UNIT UNIT PRICE		

Firefighting Equipment Oshkosh T-1500

PROJECT TOTAL (Rounded)

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Fossil Fuel - British Concept)
November 21, 1995

ADOTFTSB.xls Greiner, Inc / DKC

BRITISH CONCEPT (FOSSIL FUEL SYSTEM)

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
BURN AREA				\$142.724
Floor (HDPE Liner)	17,672	of	61.00	\$143.724 \$31.800
Curbs (Refractry Concrete)	471		\$1.80 \$16.00	\$31,809 \$7.540
Interior Crushed Stone (9")			\$16.00	\$7,540
Berm	1,964	=	\$7.70	\$15,119
	524	sy	\$14.00	\$7,330
Zonal Fuel/Water Delivery Network	200	1.5	A4E 00	44 500
Piping (2" CS, Welded, w/ Fittings)	300		\$15.00	\$4,500
Valve Control Manifold		Is	\$3,292.00	\$3,292
Nozzles		ea	\$35.00	\$1,050
Pressure Pump	1	ea	\$12,834.00	\$12,834
Drainage System	_			
Inlets		ea	\$1,700.00	\$3,400
Manholes		ea	\$1,550.00	\$3,100
Piping (12" DIP)	450		\$35.00	\$15,750
Knife Gate Valves (12")	2	ea	\$4,000.00	\$8,000
Weir / Control Structure	1	ea	\$5,000.00	\$5,000
Ignition/Flame Generation System	1	ls	\$25,000.00	\$25,000
VEHICLE MANEUVERING AREA				<u>\$124.533</u>
Apron (Crushed Stone)	11,321	sy	\$11.00	\$124,533
MOCKUPS				<u>\$395,250</u>
Combined Fuselage/Pool Fire/Confined Entry Trainer	1	ea	\$395,250.00	\$395,250
ODEDATIONS BUILDING				6220 000
OPERATIONS BUILDING	2 000	. .	6100.00	\$228,000 \$200,000
Office/Control/Training/ARFF Vehicle Building Control Center	2,000	is	\$100.00 \$28,000.00	\$200,000 \$28,000
Control Contes	'	15	425,000.00	¥20,000
FUEL / WATER STORAGE SYSTEM				<u> \$211.118</u>
Fuel Storage Facility				
Concrete Dike	297	су	\$350.00	\$103,950
Fuel Storage Tank (10,000G w/ Found.)	1	ea	\$14,000.00	\$14,000
Pressure Pumps	1	ea	\$12,834.00	\$12,834
Piping (2" CS, Welded, Coated)	200		\$15.00	\$3,000
Valves	2	ea	\$1,200.00	\$2,400
Distribution Piping				
Piping (2" CS, Welded, Coated, Buried)	450		\$18.00	\$8,100
Valves (Motor Operated w/ Box)	2	ea	\$3,292.00	\$6,584
Tanker Truck Offloading Rack	•			
Concrete Truck Pad	200	sy	\$25.00	\$5,000
Equipment Pads	20	су	\$400.00	\$8,000
Misc. Steel	500	lbs	\$1.10	\$550
Piping (4" to tank)	150	lf	\$30.00	\$4,500
Valves	2	ea	\$1,200.00	\$2,400
Equipment	1	ls	\$20,000.00	\$20,000
Water			• • •	
Storage Tank	. 1	ea	\$10,000.00	\$10,000
Piping (4")	150		\$30.00	\$4,500
Valves	4		\$900.00	\$3,600
Pumps	1		\$1,700.00	\$1,700
· william	•		1.77.00.00	7,,,,,,

Page: 2 of 3

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Fossil Fuel - British Concept)

November 21, 1995

ADOTFTSB.xls Greiner, Inc / DKC

BRITISH CONCEPT (FOSSIL FUEL SYSTEM) DESCRIPTION QUANTITY UNIT **UNIT PRICE** COST **WASTEWATER TREATMENT SYSTEM** \$41.022 Retention /Evaporation Pond 2,756 cy \$4.00 \$11,022 \$20,000.00 \$20,000 Oil / Water Seperator 1 ea Catch Basin \$10,000.00 \$10,000 1 ea **OTHER COMPONENTS** <u>\$534.458</u> Sitework 16 ac \$1,500.00 \$24,000 Clear & Grub Demolition 1 allow \$5,000.00 \$5,000 Excavation 25,168 cy \$2.85 \$71,729 1 allow \$10,000.00 \$10,000 Landscaping **Access Road** 3,333 sy \$16.00 \$53,333 Paving **Parking Lot** Curb 150 If \$6.50 \$975 234 sy Paving \$9.00 \$2,106 Security Fence \$42,750 6' Chain link w/ 3 str. barbed wire 3,563 If \$12.00 Motorized Vehicle gates 3 ea \$2,500.00 \$7,500 Water Well \$10,000 Well 1 ea \$10,000.00 Piping (4") 775 If \$30.00 \$23,250 Valves & Valve Boxes 2 ea \$1,400.00 \$2,800 **Environmental Monitoring** Fuel System Leak Detection 1 Is \$7.500.00 \$7,500 Monitoing Wells 8 ea \$1,000.00 \$8,000 **Water Supply** Wet Tap 1 ea \$2,000.00 \$2,000 Piping w Trenching & Backfill 1,300 If \$30.00 \$39,000 \$500.00 \$500 **Testing & Chlorination** 1 Is \$1,400.00 \$5,600 Gate Valves w/ Valve Box 4 ea \$9,000 **Backflow Preventor** 1 ea \$9,000.00 Sanitary Sewer 6" Gravity Piping 50 If \$20.00 \$1,000 1,300 If \$31,200 4" Force Main Piping \$24.00 \$25,000.00 \$25,000 Lift Station 1 ea **Electrical Service** \$3,900 **Primary Distribution** 1,300 If \$3.00 Secondary Distribution 650 If \$17,550 Distribution/Power to Tank Farm & Offloadin \$27.00 Distribution/Power to Fire Trainer Areas 1,200 If \$27.00 \$32,400 230 If \$6,210 Distribution to Waste Water Treatment \$27.00 \$50,000 System Controls 1 Is \$50,000.00 Telephone Service 1,300 If \$20.00 \$26,000 \$2,500.00 Parking Lot Lighting - 25' Alum. Pole 3 ea \$7,500 **Appurtenances Pavement Markings** 4" Striping 1,466 If \$0.20 \$293 18" Stop Bar 130 If \$1.55 \$202

Page: 3 of 3

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Fossil Fuel - British Concept)

November 21, 1995

ADOTFTSB.xls Greiner, Inc / DKC

\$2,730,000

BRITISH CONCEPT (FOSSIL FUEL SYSTEM) QUANTITY UNIT **UNIT PRICE** COST **DESCRIPTION** 8 ea \$55.00 \$440 **Directional Arrows Pavement Messages** 4 ea \$200.00 \$800 2 ea \$185.00 \$370 **HC Symbols** Signs 3 ea \$100.00 \$300 Stop \$5,000 \$5,000.00 Entry 1 ea \$1,250 Misc. / Warning 25 ea \$50.00 **SUBTOTAL** \$1,678,105 Permitting @ 1.0% 16,781 Impact Fees @ allowance 75,000 Design Fees @ 8.0% 134,248 CE & | Fees @ 10.0% 167,811 **SUBTOTAL** \$2,071,945 15.0% \$310,792 Contingency **CONSTRUCTION TOTAL** \$2,380,000 \$25,000.00 Shipping from England Firefighting Equipment Oshkosh T-1500 \$325,000

PROJECT TOTAL (Rounded)

Page : 1 of 3

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Propane Fuel) November 21, 1995

ADOTFTSB.xls Greiner, Inc / DKC

	4 - 1	PANE FUEL SYSTEM	<u>M</u>		
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST	
BURN AREA				4400 500	
Floor (HDPE Liner)	21 422	- 4	44.00	<u>\$130.506</u>	
	21,422		\$1.80	\$38,559	
Curbs (Refractry Concrete)	471		\$16.00	\$7,540	
Interior Crushed Stone (9")	2,380	•	\$7.70	\$18,327	
Berm	524		\$14.00	\$7,330	
Zonal Fuel/Water Delivery Network	(Included in	Mockup	price)		
Drainage System					
Inlets	3	ea	\$1,700.00	\$5,100	
Manholes	3		\$1,550.00	\$4,650	
Piping (12" DIP)	800	lf	\$35.00	\$28,000	
Knife Gate Valves (12")	4	ea	\$4,000.00	\$16,000	
Weir / Control Structure	1	ea	\$5,000.00	\$5,000	
VEHICLE MANEUVERING AREA				\$1 19.950	
Apron (Crushed Stone)	10,905	sy	\$11.00	\$119,950	
MOCKUPS				\$3,000,000	
Fuselage / Pool Fire Trainer	1	ea	\$1,500,000.00	\$1,500,000	
Confined Entry Fire Trainer		ea	\$1,500,000.00	\$1,500,000	
OPERATIONS BUILDING			·	6700 000	
Office/Control/Training/ARFF Vehicle Building	2.000	_£	6100.00	\$700,000	
Control Center	2,000 1	sr Is	\$100.00 \$500,000.00	\$200,000 \$500,000	
ELIEL / WATER CTORACE CYCTEM				100.050	
FUEL / WATER STORAGE SYSTEM				<u>\$82.650</u>	
Fuel Storage Facility			444.000.00		
Fuel Storage Tank (10,000G w/ Found.)		ea	\$14,000.00	\$14,000	
Piping (4" CS, Welded, Coated)	200		\$30.00	\$6,000	
Valves	_	ea	\$1,200.00	\$2,400	
Distribution Piping	(Included in	Mockup	price)		
Tanker Truck Offloading Rack					
Concrete Truck Pad	200	-	\$25.00	\$5,000	
Equipment Pads		cy	\$400.00	\$8,000	
Misc. Steel	500	lbs	\$1.10	\$550	
Piping (4" to tank)	150	lf	\$30.00	\$4,500	
Valves	2	ea	\$1,200.00	\$2,400	
Equipment	1	ls	\$20,000.00	\$20,000	
Water					
Storage Tank	1	ea	\$10,000.00	\$10,000	
Piping (4")	150		\$30.00	\$4,500	
Valves		ea	\$900.00	\$3,600	
Pumps		ea	\$1,700.00	\$1,700	
WASTEWATER TREATMENT SYSTEM				<u>\$21.022</u>	
Retention /Evaporation Pond	2,756	CV	\$4.00	\$11,022	
	_,,	~,	Y-100	411,044	

Page : 2 of 3

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Propane Fuel) November 21, 1995

DESCRIPTION

ADOTFTSB.xls Greiner, Inc / DKC

COST

PROPANE FUEL SYSTEM JNIT UNIT PRICE

QUANTITY UNIT

DEGOTAL FIGH	COANTITI	ONIT	UNIT PRICE	CO31
•				
OTHER COMPONENTS				\$452,058
Sitework	-			3452,056
Clear & Grub	16	ac	\$1,500.00	\$24,000
Demolition	1	allow	\$5,000.00	\$5,000
Excavation	25,168	CV	\$2.85	\$71,729
Landscaping		allow	\$10,000.00	\$10,000
Access Road			•	•
Paving	3,333	sy	\$16.00	\$53,333
Parking Lot				
Curb	150	lf	\$6.50	\$975
Paving	234	sy	\$9.00	\$2,106
Security Fence				
6' Chain link w/ 3 str. barbed wire	3,563	lf	\$12.00	\$42,750
Motorized Vehicle gates	3	ea	\$2,500.00	\$7,500
Water Well				
Well		ea	\$10,000.00	\$10,000
Piping (4")	775	lf	\$30.00	\$23,250
Valves & Valve Boxes	2	ea	\$1,400.00	\$2,800
Environmental Monitoring				
Fuel System Leak Detection	1	ls	\$7,500.00	\$7,500
Monitoing Wells	8	ea	\$1,000.00	\$8,000
Water Supply				
Wet Tap		ea	\$2,000.00	\$2,000
Piping w Trenching & Backfill	1,300		\$30.00	\$39,000
Testing & Chlorination		ls	\$500.00	\$500
Gate Valves w/ Valve Box	4	ea	\$1,400.00	\$5,600
Backflow Preventor	1	ea	\$9,000.00	\$9,000
Sanitary Sewer				
6" Gravity Piping	50		\$20.00	\$1,000
4" Force Main Piping	1,300		\$24.00	\$31,200
Lift Station	1	ea	\$25,000.00	\$25,000
Electrical Service	1 200	1.5	40.00	40.000
Primary Distribution	1,300	. IT	\$3.00	\$3,900
Secondary Distribution	650	15	627.00	617 EEO
Distribution/Power to Tank Farm & Offloadin Distribution/Power to Fire Trainer Areas	(Included in		\$27.00	\$17,550
Distribution to Waste Water Treatment	230	-	\$27.00	\$6,210
System Controls	(Included in			\$6,210
Telephone Service	1,300	•	\$20.00	\$26,000
Parking Lot Lighting - 25' Alum. Pole		ea	\$2,500.00	\$7,500
Appurtenances	3	Ca	V2,500.00	\$7,500
Pavement Markings				
4" Striping	1,466	If	\$0.20	\$293
18" Stop Bar	130		\$1.55	\$202
Directional Arrows		ea	\$55.00	\$440
	•		700.00	7 1 10

Page: 3 of 3

ARIZONA DEPARTMENT OF TRANSPORTATION ARFF TRAINING FACILITY FEASIBILITY STUDY

Cost Estimate for Schematic Layout #1SB (Propane Fuel) November 21, 1995

ADOTFTSB.xls Greiner, Inc / DKC

\$6,575,000

	PROPANE FUEL SYSTEM					
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE		COST	
Pavement Messages	4	ea	\$200.00		\$800	
HC Symbols		ea	\$185.00		\$370	
Signs	•					
Stop	3	ea	\$100.00		\$300	
Entry	1	ea	\$5,000.00		\$5,000	
Misc. / Warning	25	ea	\$50.00		\$1,250	
			SUBTOTAL		\$4,506,186	
	Permitting	@	1.0%	\$	45,062	
	Impact Fees		allowance	\$	75,000	
	Design Fees		8.0%	\$	360,495	
	CE & I Fees		10.0%	\$	450,619	
			SUBTOTAL		\$5,437,362	
	Contingency		15.0%		\$815,604	
		CONST	RUCTION TOTAL		\$6,250,000	
	Firefighting Equipment	Oshkos	h T-1500	\$	325,000	

PROJECT TOTAL (Rounded)